CAPSTONE PROJECT SUBMISSION DOCUMENT

Scenario 1:

project using Selenium with Java concepts (Implement TestNG with Page Object Model Framework) Implement mini project using Gherkin language

1. Launch a below URL and verify the title of the Page https://wordpress.org/

2. Do Mouse Over on Download & Extend and click on Get WordPress option

3. Verify the text in middle of the page as “Get WorkPress” using TestNG Assertions

4. Click on Community and click on Photo Directory

5. Search with any one of the pic name and verify the pictures are displayed

Note: Please implement below concepts as mandatory while designing this Case Study

1. Create a Maven Project and update POM.XML accordingly to implement this Mini Project.

2. Create a branch name – CapstoneProject_5 and implement your code in that branch. After coding is completed commit and push your code into that branch.

3. As implementing in POM design pattern, create an Object Repository package to track each and every page objects.

4. Create TestNG.xml and run the test cases from TestNG.xml

5. Use OOPs concepts to implement this framework and maintain Base Case separately

6. User TestNG Assertions to validate expected results how to check the results for this program in which folder or which file it will saving.

Overview:

This capstone project focuses on automating the functional workflow of the WordPress.org website using Selenium WebDriver with Java, TestNG, Cucumber (BDD), and Maven, while implementing the Page Object Model (POM) design pattern. The framework is designed with a clear separation of concerns, where web elements are maintained in an Object Repository, page actions are organized into dedicated page classes, and test execution is managed through a TestRunner integrated with TestNG. Test scenarios are written in Gherkin language to enhance readability and align with business requirements. Core OOP principles such as encapsulation, inheritance, abstraction, and modularity are applied to ensure maintainability, scalability, and reusability of the framework. The automation covers key functionalities including homepage title verification, navigation validation using mouse actions, content verification through TestNG assertions, and search functionality testing in the Photo Directory section. Overall, the project follows industry-standard practices and is structured to support future enhancements efficiently.

1.Validate WordPress Website Flow

1. Launch URL: https://wordpress.org/

2. Verify page title

3. Mouse over "Download & Extend"

4. Click on "Get WordPress"

5. Verify text in middle of page: "Get WordPress"

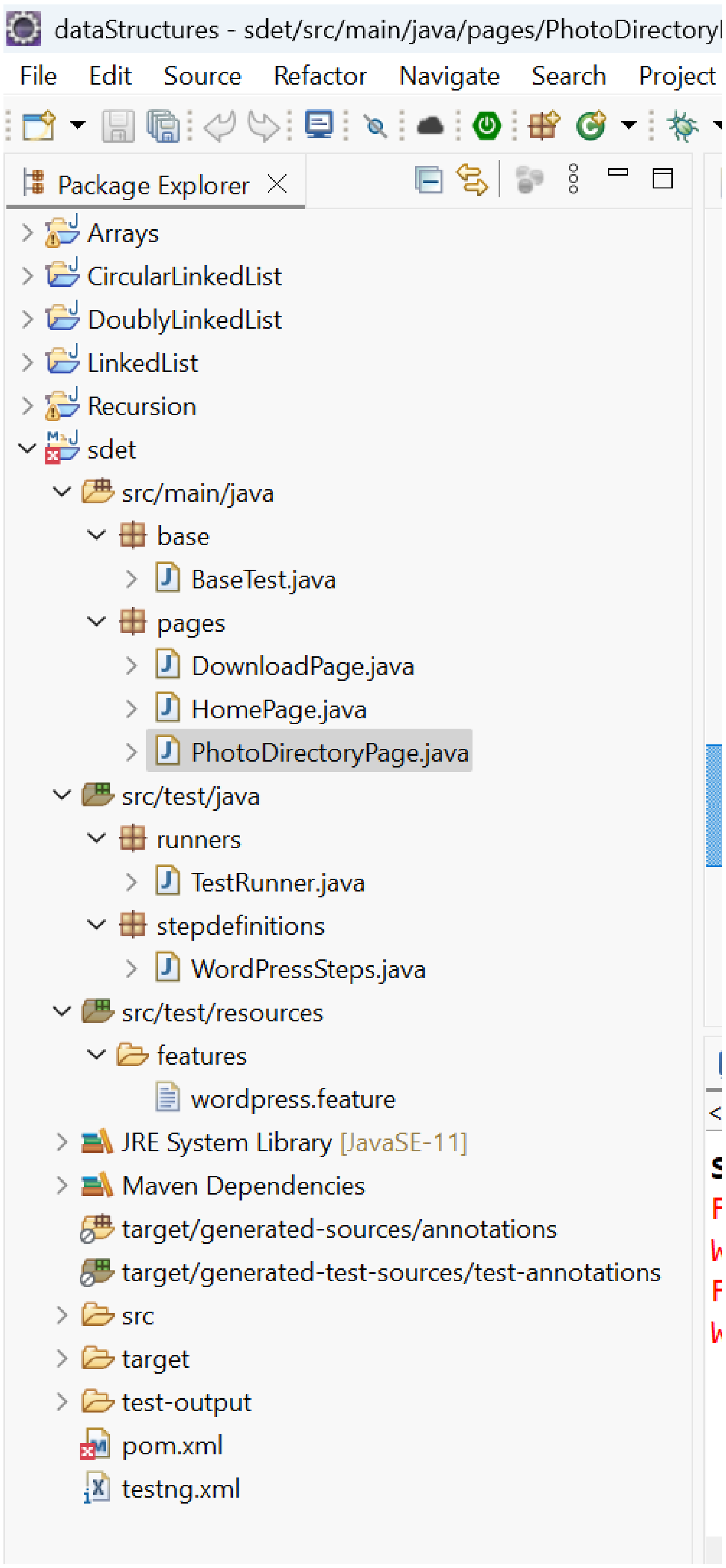
6. Click on "Community"

7. Click on "Photo Directory"

8. Search for any picture name

9. Verify pictures are displayed

2.Project Structure:


dataStructures - sdet/src/main/java/pages/PhotoDirectory

```
> Arrays
> CircularLinkedList
> DoublyLinkedList
> LinkedList
> Recursion
v sdet
  v src/main/java
    v base
      > BaseTest.java
    v pages
      > DownloadPage.java
      > HomePage.java
      > PhotoDirectoryPage.java
  v src/test/java
    v runners
      > TestRunner.java
    v stepdefinitions
      > WordPressSteps.java
  v src/test/resources
    v features
        wordpress.feature
  > JRE System Library [JavaSE-11]
  > Maven Dependencies
    target/generated-sources/annotations
    target/generated-test-sources/test-annotations
  > src
  > target
  > test-output
    pom.xml
    testng.xml
```

fig: Project structure IDE

3.Git Usage:

>> git init

>> git remote add origin

>> git checkout -b SDET

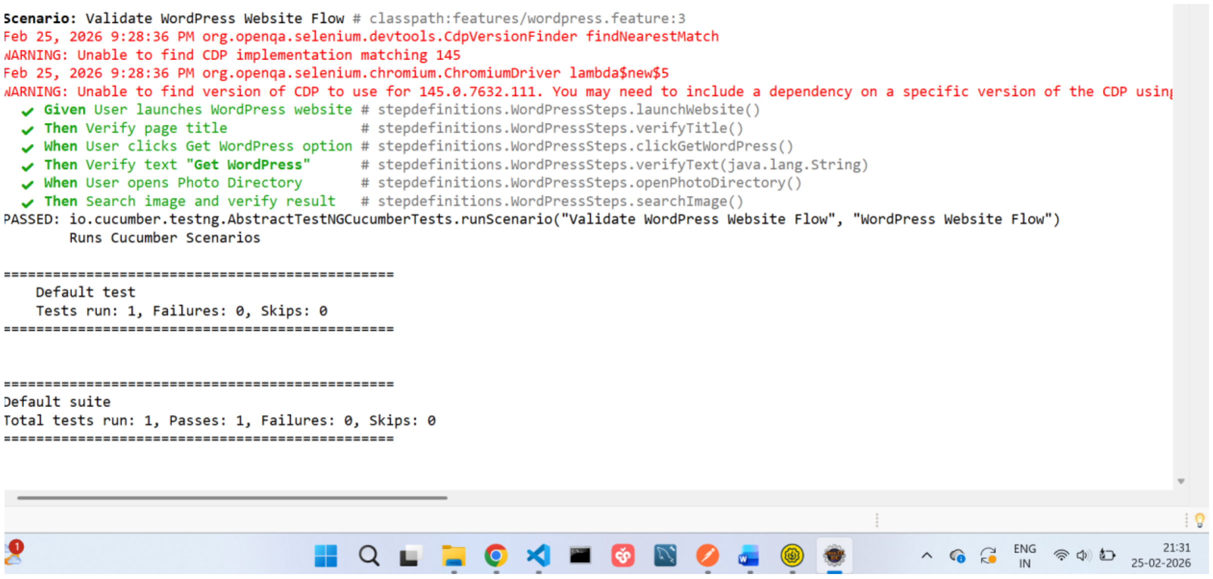
>> git add .

>> git commit -m "initial commit"

>> git push -u origin SDET

repo link: https://github.com/Chithrashree-P/SDET

4. Execution Report:



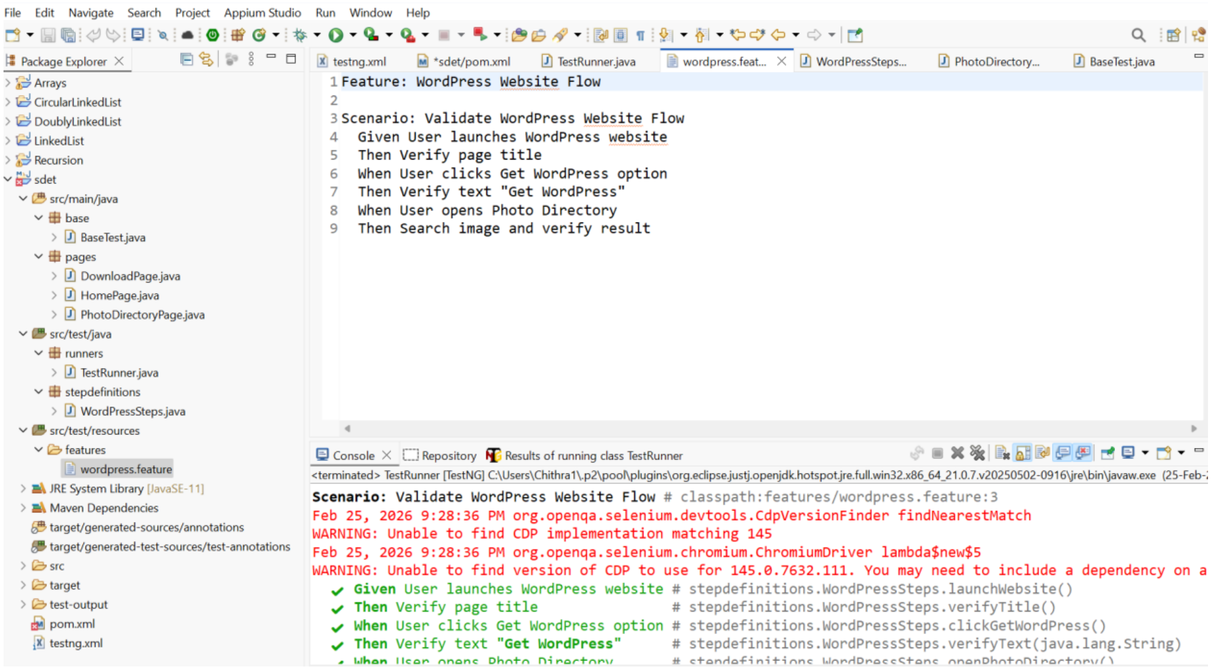
```
Scenario: Validate WordPress Website Flow # classpath:features/wordpress.feature:3
Feb 25, 2026 9:28:36 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find CDP implementation matching 145
Feb 25, 2026 9:28:36 PM org.openqa.selenium.chromium.ChromiumDriver lambda$new$5
WARNING: Unable to find version of CDP to use for 145.0.7632.111. You may need to include a dependency on a specific version of the CDP using
  ✓ Given User launches WordPress website # stepdefinitions.WordPressSteps.launchWebsite()
  ✓ Then Verify page title                # stepdefinitions.WordPressSteps.verifyTitle()
  ✓ When User clicks Get WordPress option # stepdefinitions.WordPressSteps.clickGetWordPress()
  ✓ Then Verify text "Get WordPress"      # stepdefinitions.WordPressSteps.verifyText(java.lang.String)
  ✓ When User opens Photo Directory       # stepdefinitions.WordPressSteps.openPhotoDirectory()
  ✓ Then Search image and verify result   # stepdefinitions.WordPressSteps.searchImage()
PASSED: io.cucumber.testng.AbstractTestNGCucumberTests.runScenario("Validate WordPress Website Flow", "WordPress Website Flow")
        Runs Cucumber Scenarios

===============================================
    Default test
    Tests run: 1, Failures: 0, Skips: 0
===============================================


===============================================
Default suite
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
===============================================
```

fig : Execution of the project and html report.

5. Gherkin Feature File

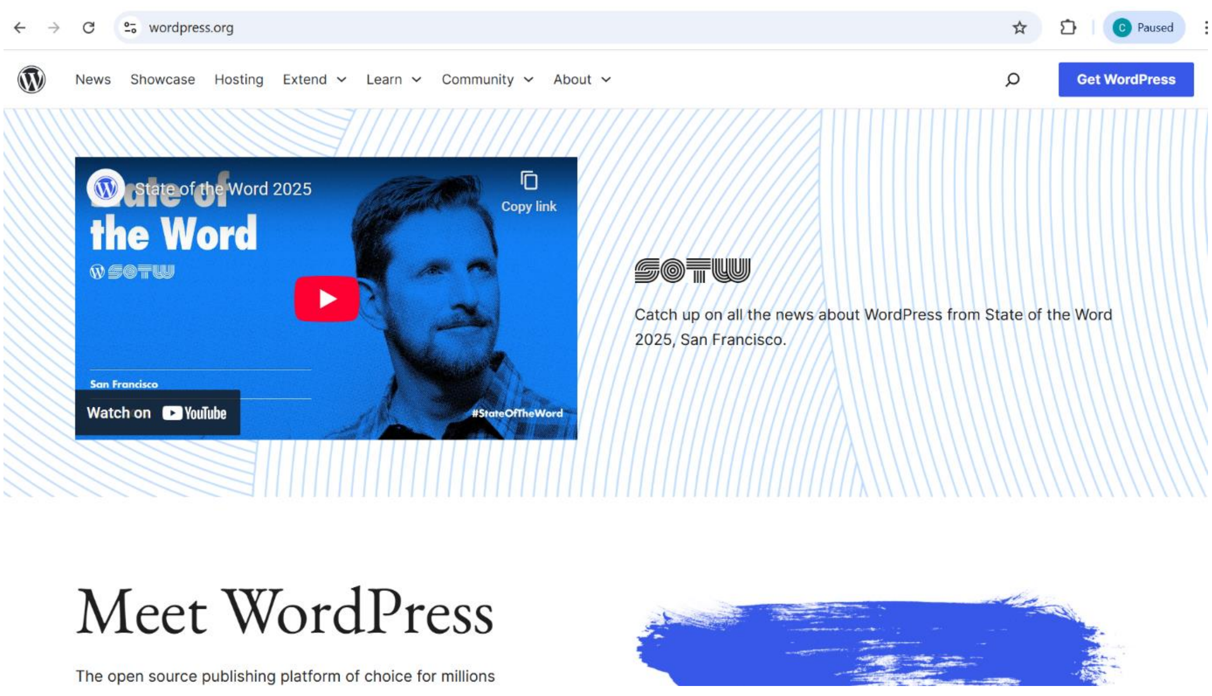


```
Feature: WordPress Website Flow

Scenario: Validate WordPress Website Flow
  Given User launches WordPress website
  Then Verify page title
  When User clicks Get WordPress option
  Then Verify text "Get WordPress"
  When User opens Photo Directory
  Then Search image and verify result
```

```
<terminated> TestRunner [TestNG] C:\Users\Chithra1\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0916\jre\bin\javaw.exe  (25-Feb-
Scenario: Validate WordPress Website Flow # classpath:features/wordpress.feature:3
Feb 25, 2026 9:28:36 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find CDP implementation matching 145
Feb 25, 2026 9:28:36 PM org.openqa.selenium.chromium.ChromiumDriver lambda$new$5
WARNING: Unable to find version of CDP to use for 145.0.7632.111. You may need to include a dependency on a
  ✔ Given User launches WordPress website # stepdefinitions.WordPressSteps.launchWebsite()
  ✔ Then Verify page title                # stepdefinitions.WordPressSteps.verifyTitle()
  ✔ When User clicks Get WordPress option # stepdefinitions.WordPressSteps.clickGetWordPress()
  ✔ Then Verify text "Get WordPress"      # stepdefinitions.WordPressSteps.verifyText(java.lang.String)
  ✔ When User opens Photo Directory       # stepdefinitions.WordPressSteps.openPhotoDirectory()
```

6. Output pictures for verification:

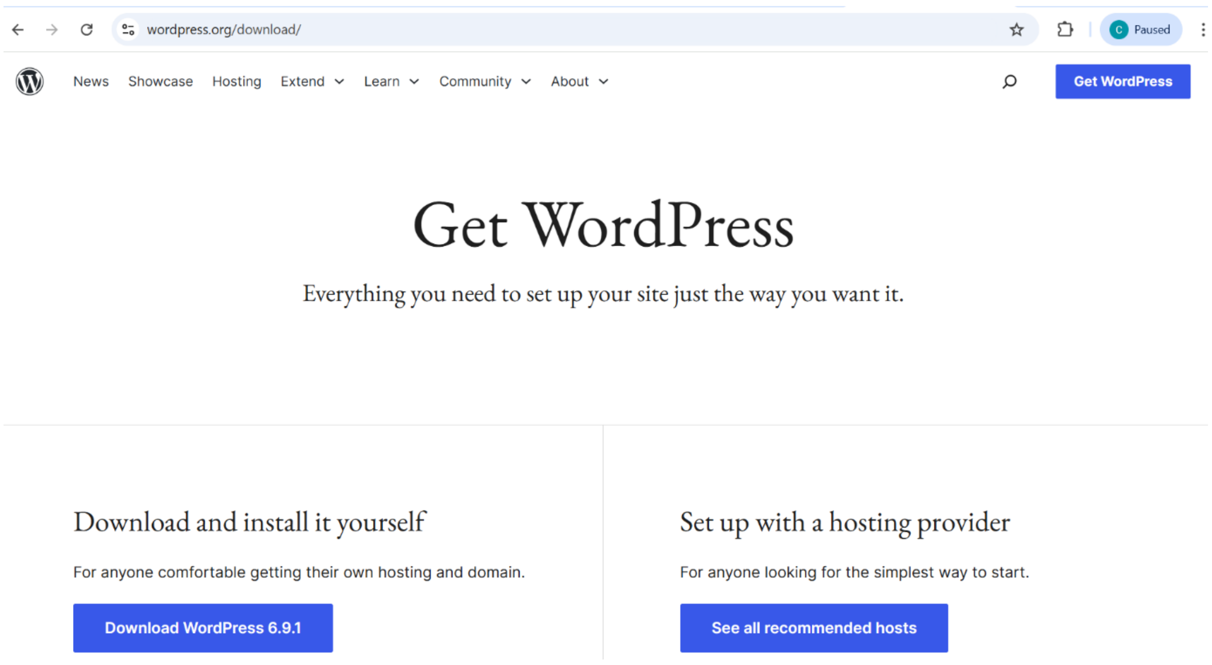


Catch up on all the news about WordPress from State of the Word 2025, San Francisco.

Meet WordPress

The open source publishing platform of choice for millions

fig: Home Page



wordpress.org/download/

Get WordPress

Everything you need to set up your site just the way you want it.

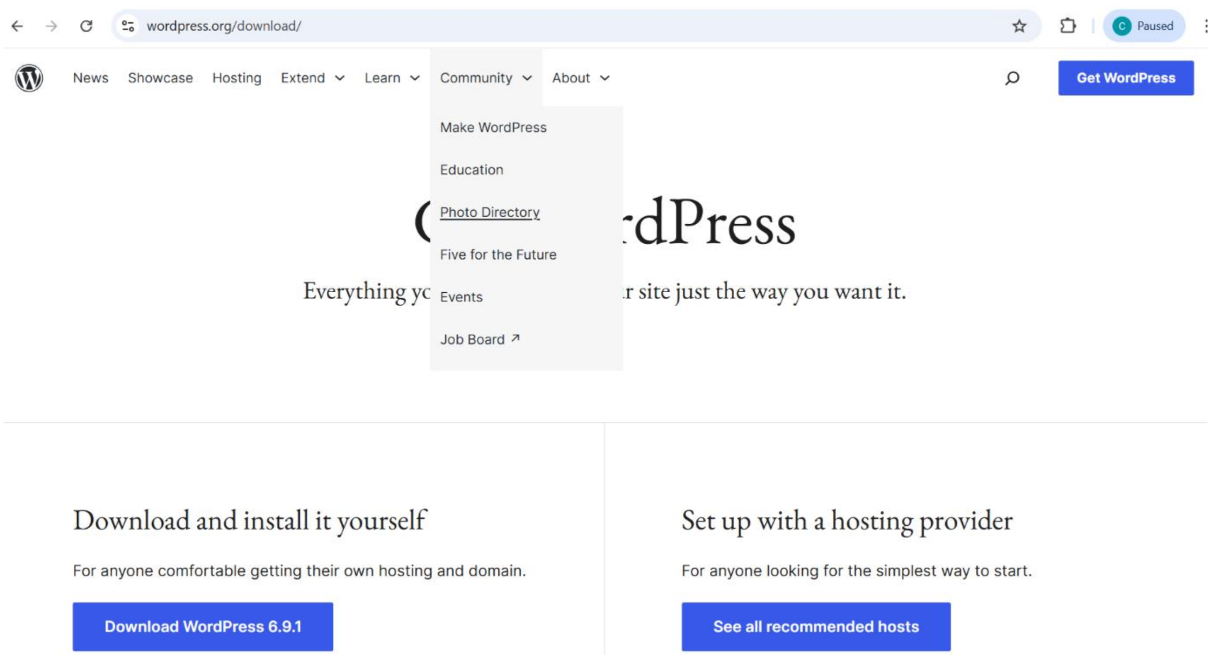
Download and install it yourself

For anyone comfortable getting their own hosting and domain.

Set up with a hosting provider

For anyone looking for the simplest way to start.

fig: Get WordPress Page



wordpress.org/download/

Download and install it yourself

For anyone comfortable getting their own hosting and domain.

Set up with a hosting provider

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fig: Community & Photo Directory

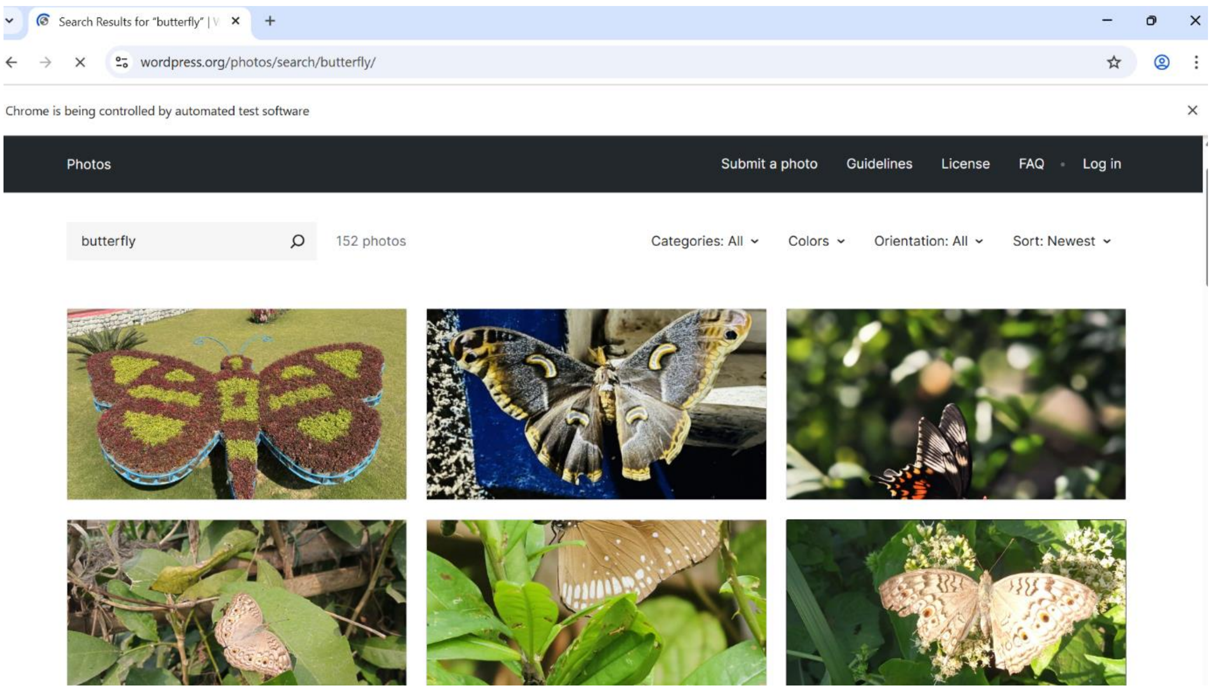

Search Results for "butterfly" | V
wordpress.org/photos/search/butterfly/
Chrome is being controlled by automated test software
Photos
Submit a photo
Guidelines
License
FAQ
Log in
butterfly
152 photos
Categories: All
Colors
Orientation: All
Sort: Newest

fig: Photos directory Page

Scenario 2:

Selenium Automation using Python & PyTest

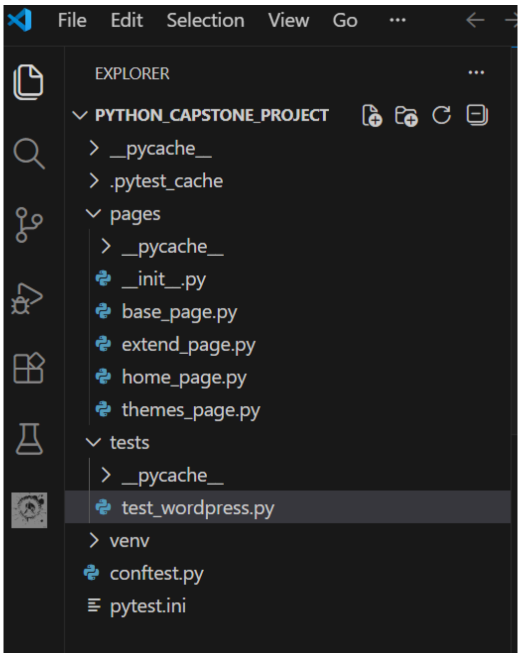
● Project Title: Python_Capstone_Project

● Objective: Automate WordPress theme search using Selenium, Python, and PyTest, including mouse hover and theme title validation.

● Tools & Technologies:

- Python 3.14 (Programming Language)
- Selenium WebDriver (Automation Tool)
- pytest (Test Framework)
- Google Chrome (Browser)
- Visual Studio Code (IDE)
- WebDriver Manager (Driver Management)
- Windows 11 (OS)

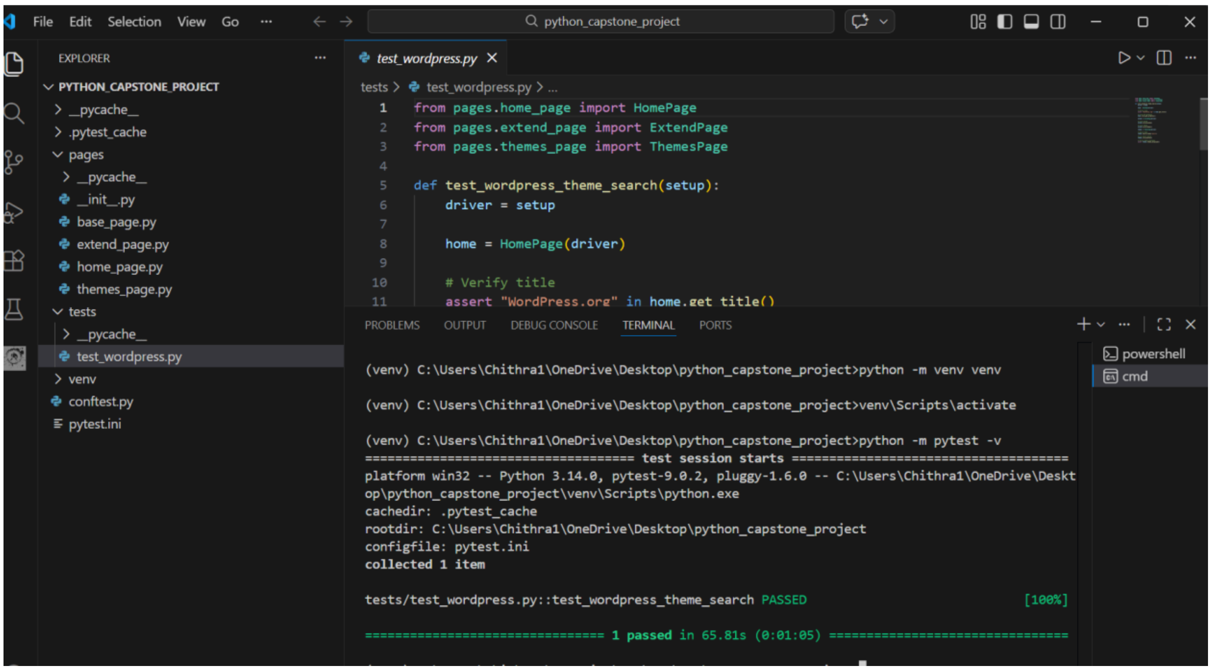
Project Structure:



```
PYTHON_CAPSTONE_PROJECT
  > __pycache__
  > .pytest_cache
  v pages
    > __pycache__
      __init__.py
      base_page.py
      extend_page.py
      home_page.py
      themes_page.py
  v tests
    > __pycache__
      test_wordpress.py
  > venv
    conftest.py
    pytest.ini
```

fig: File structure and code

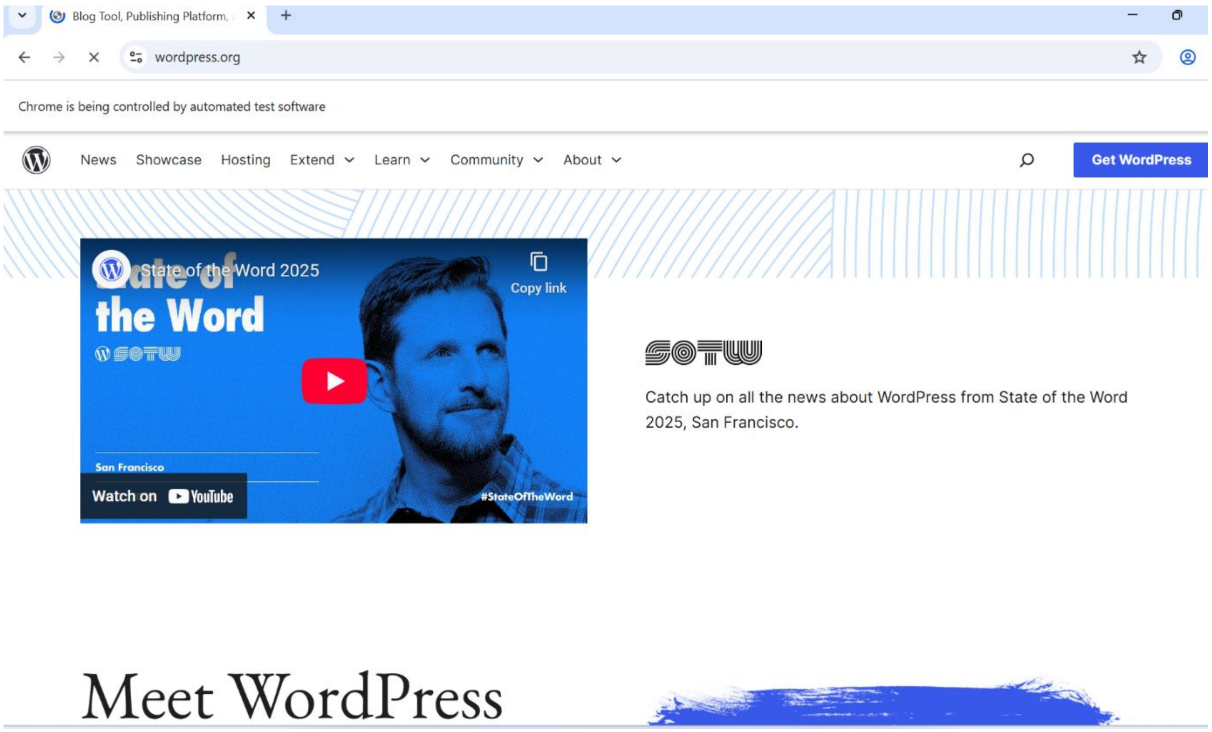
Output Verification Image's:



```python
from pages.home_page import HomePage
from pages.extend_page import ExtendPage
from pages.themes_page import ThemesPage

def test_wordpress_theme_search(setup):
    driver = setup

    home = HomePage(driver)

    # Verify title
    assert "WordPress.org" in home.get_title()
```

```
(venv) C:\Users\Chithra1\OneDrive\Desktop\python_capstone_project>python -m venv venv

(venv) C:\Users\Chithra1\OneDrive\Desktop\python_capstone_project>venv\Scripts\activate

(venv) C:\Users\Chithra1\OneDrive\Desktop\python_capstone_project>python -m pytest -v
================================== test session starts ===================================
platform win32 -- Python 3.14.0, pytest-9.0.2, pluggy-1.6.0 -- C:\Users\Chithra1\OneDrive\Deskt
op\python_capstone_project\venv\Scripts\python.exe
cachedir: .pytest_cache
rootdir: C:\Users\Chithra1\OneDrive\Desktop\python_capstone_project
configfile: pytest.ini
collected 1 item

tests/test_wordpress.py::test_wordpress_theme_search PASSED                        [100%]

=============================== 1 passed in 65.81s (0:01:05) ================================
```

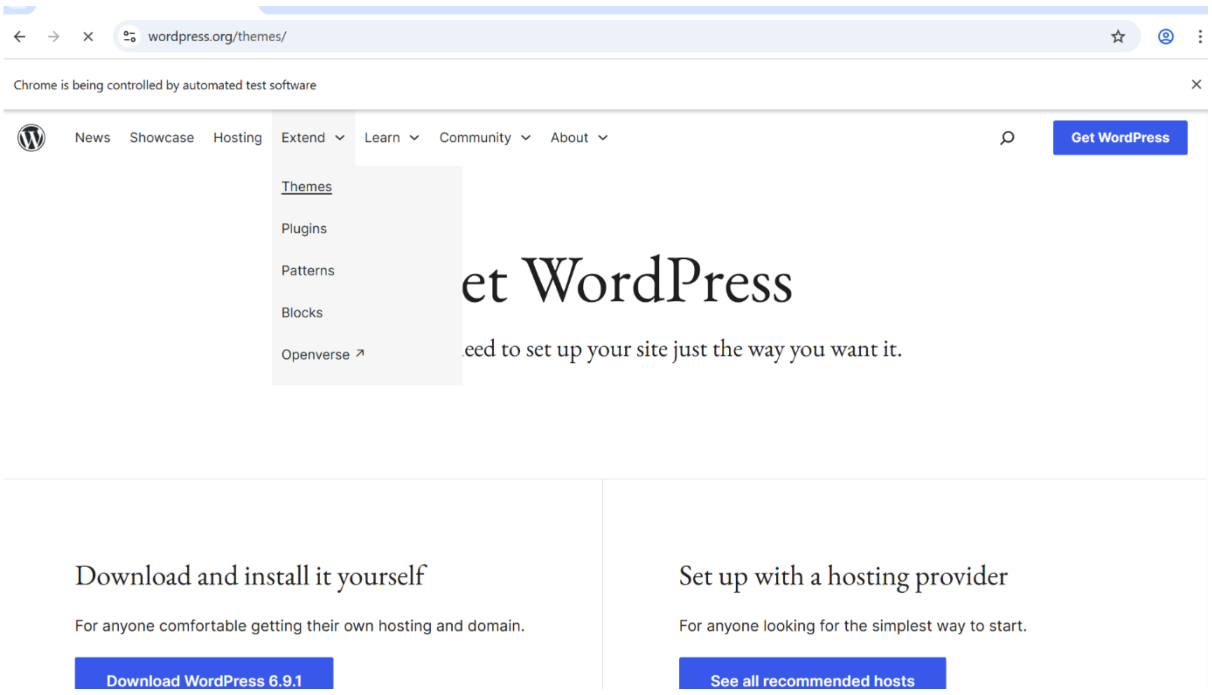
fig: Execution



Chrome is being controlled by automated test software

Catch up on all the news about WordPress from State of the Word 2025, San Francisco.

Meet WordPress



wordpress.org/themes/

Chrome is being controlled by automated test software

News Showcase Hosting Extend Learn Community About Get WordPress

Themes
Plugins
Patterns
Blocks
Openverse ↗

et WordPress

eed to set up your site just the way you want it.

Download and install it yourself

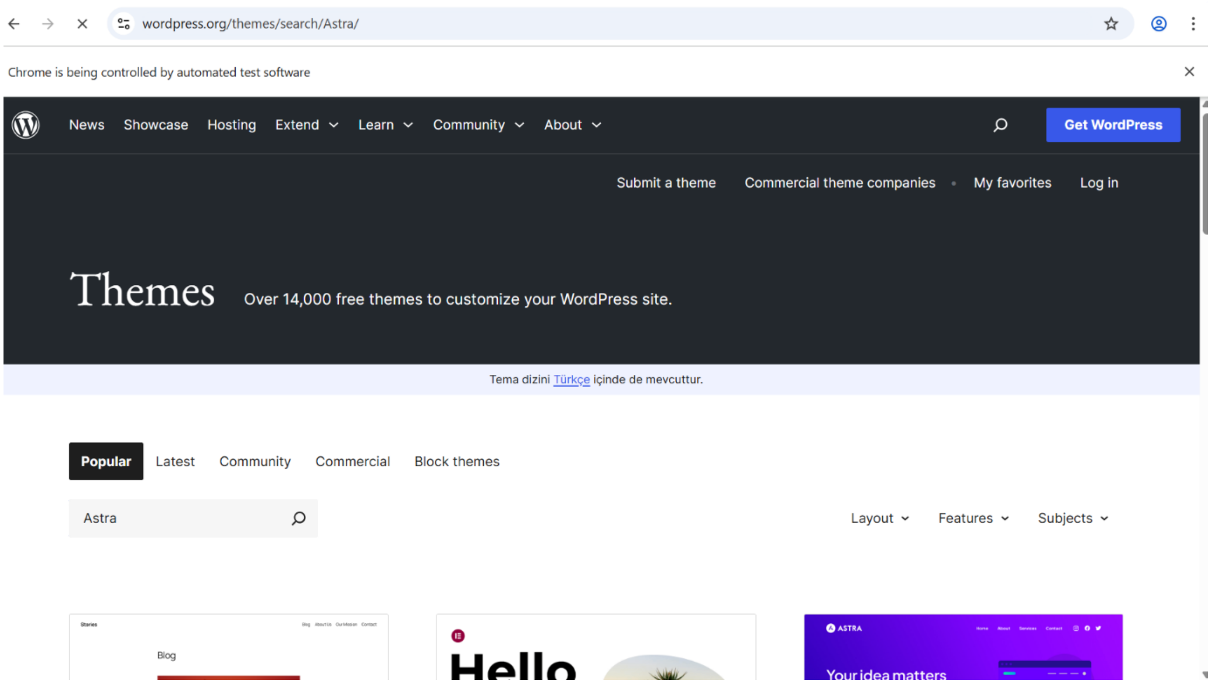
For anyone comfortable getting their own hosting and domain.

Download WordPress 6.9.1

Set up with a hosting provider

For anyone looking for the simplest way to start.

See all recommended hosts



wordpress.org/themes/search/Astra/

Chrome is being controlled by automated test software

News Showcase Hosting Extend Learn Community About Get WordPress

Submit a theme Commercial theme companies My favorites Log in

Themes Over 14,000 free themes to customize your WordPress site.

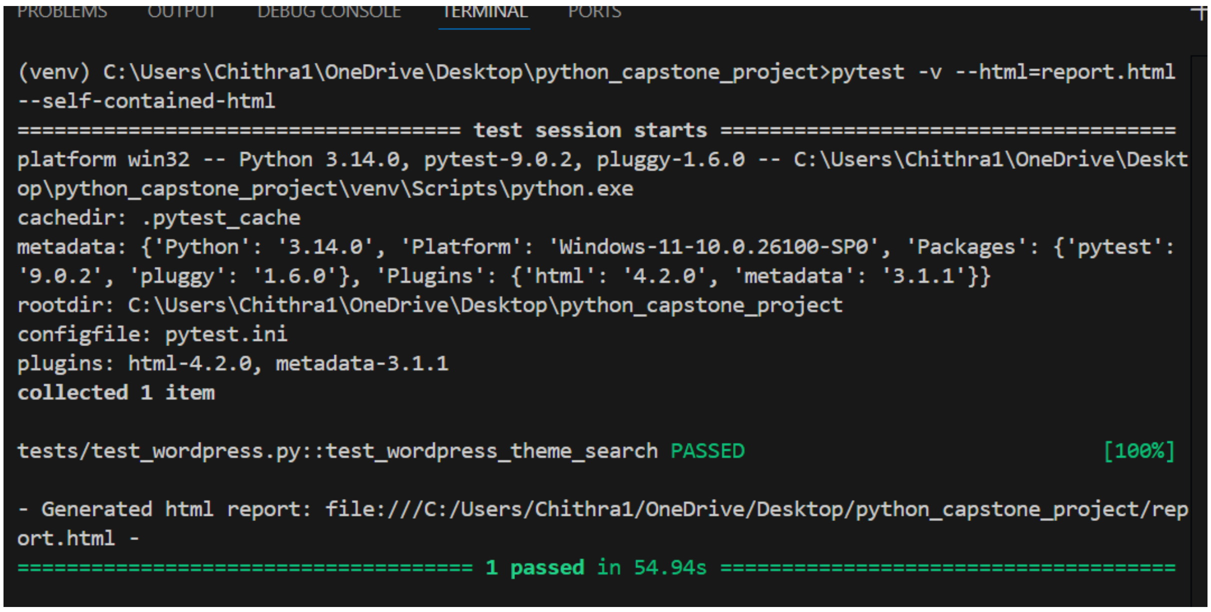
Tema dizini Türkçe içinde de mevcuttur.

Popular Latest Community Commercial Block themes

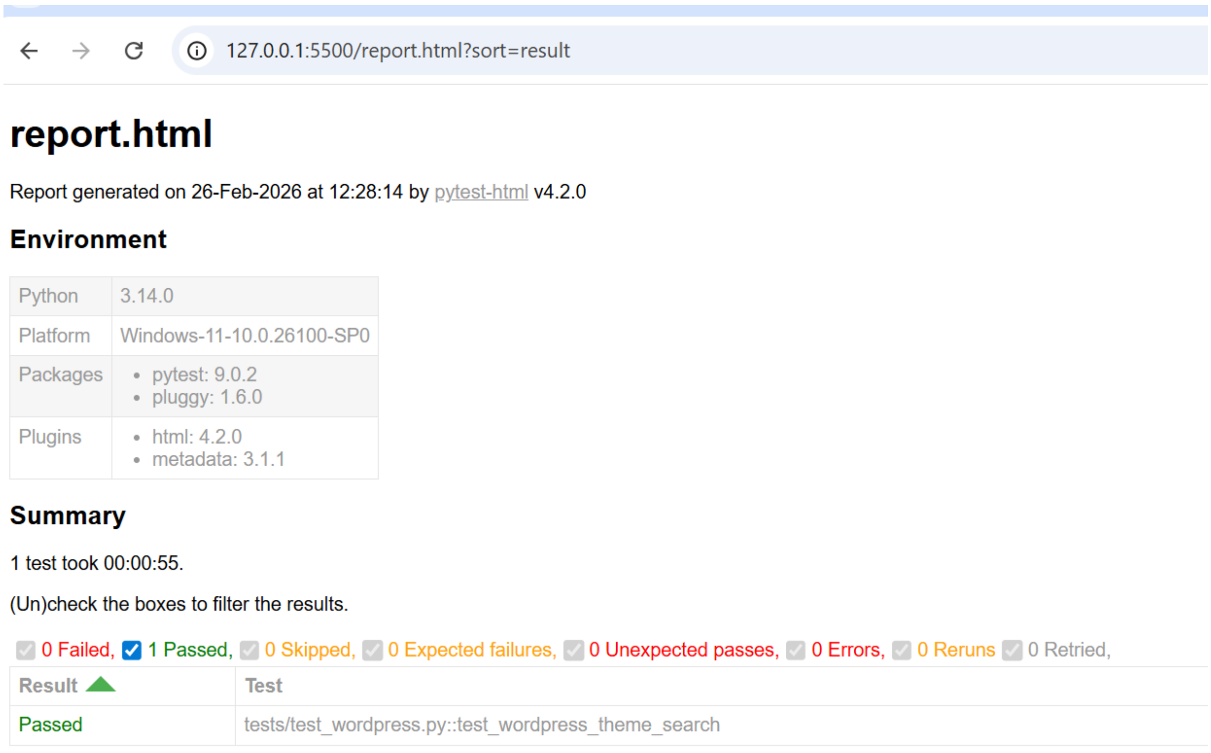
Astra

Layout Features Subjects

fig: Result



```
(venv) C:\Users\Chithra1\OneDrive\Desktop\python_capstone_project>pytest -v --html=report.html
--self-contained-html
==================================== test session starts =====================================
platform win32 -- Python 3.14.0, pytest-9.0.2, pluggy-1.6.0 -- C:\Users\Chithra1\OneDrive\Deskt
op\python_capstone_project\venv\Scripts\python.exe
cachedir: .pytest_cache
metadata: {'Python': '3.14.0', 'Platform': 'Windows-11-10.0.26100-SP0', 'Packages': {'pytest':
'9.0.2', 'pluggy': '1.6.0'}, 'Plugins': {'html': '4.2.0', 'metadata': '3.1.1'}}
rootdir: C:\Users\Chithra1\OneDrive\Desktop\python_capstone_project
configfile: pytest.ini
plugins: html-4.2.0, metadata-3.1.1
collected 1 item

tests/test_wordpress.py::test_wordpress_theme_search PASSED                              [100%]

- Generated html report: file:///C:/Users/Chithra1/OneDrive/Desktop/python_capstone_project/rep
ort.html -
===================================== 1 passed in 54.94s =====================================
```



report.html

Report generated on 26-Feb-2026 at 12:28:14 by pytest-html v4.2.0

Environment

Python	3.14.0
Platform	Windows-11-10.0.26100-SP0
Packages	• pytest: 9.0.2 • pluggy: 1.6.0
Plugins	• html: 4.2.0 • metadata: 3.1.1

Summary

1 test took 00:00:55.

(Un)check the boxes to filter the results.

☐ 0 Failed, ☑ 1 Passed, ☐ 0 Skipped, ☐ 0 Expected failures, ☐ 0 Unexpected passes, ☐ 0 Errors, ☐ 0 Reruns ☐ 0 Retried,

Result ▲	Test
Passed	tests/test_wordpress.py::test_wordpress_theme_search

Scenario 3:

Implement below Case Study using POSTMAN API Automation

Create a SOAP Ul Project and Implement a generic function to read data from MS-Excel Sheets. And use get method to trigger an APl. (Use Groovy Script and SOAP Ul Assertions to validate the responses)

URL: https://restcountries.com/v3.1/subregion/{subregion}
https://restcountries.com/v3.1/subregion/Northern Europe

Project Title:

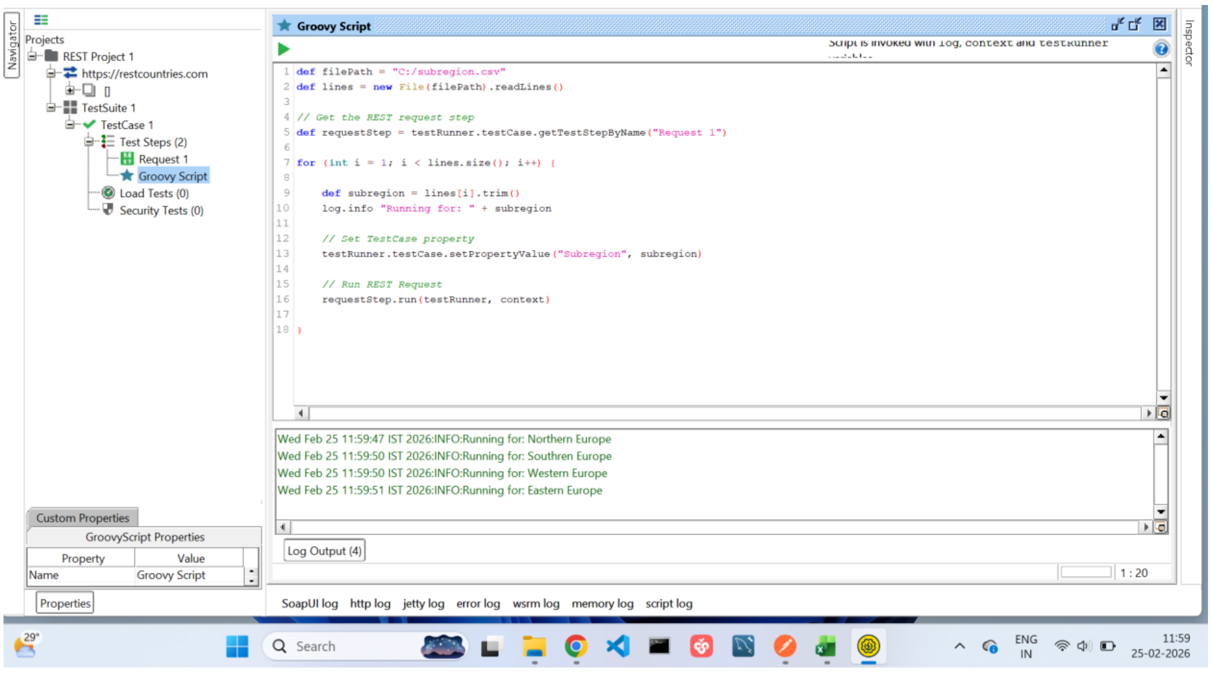
API Automation Using Postman and SOAP UI with Excel

Objective:

To automate the REST API
https://restcountries.com/v3.1/subregion/{subregion}
using:

- Postman Automation
- SOAP UI
- Groovy Script
- Excel
- SOAP UI Assertions

Groovy Script:

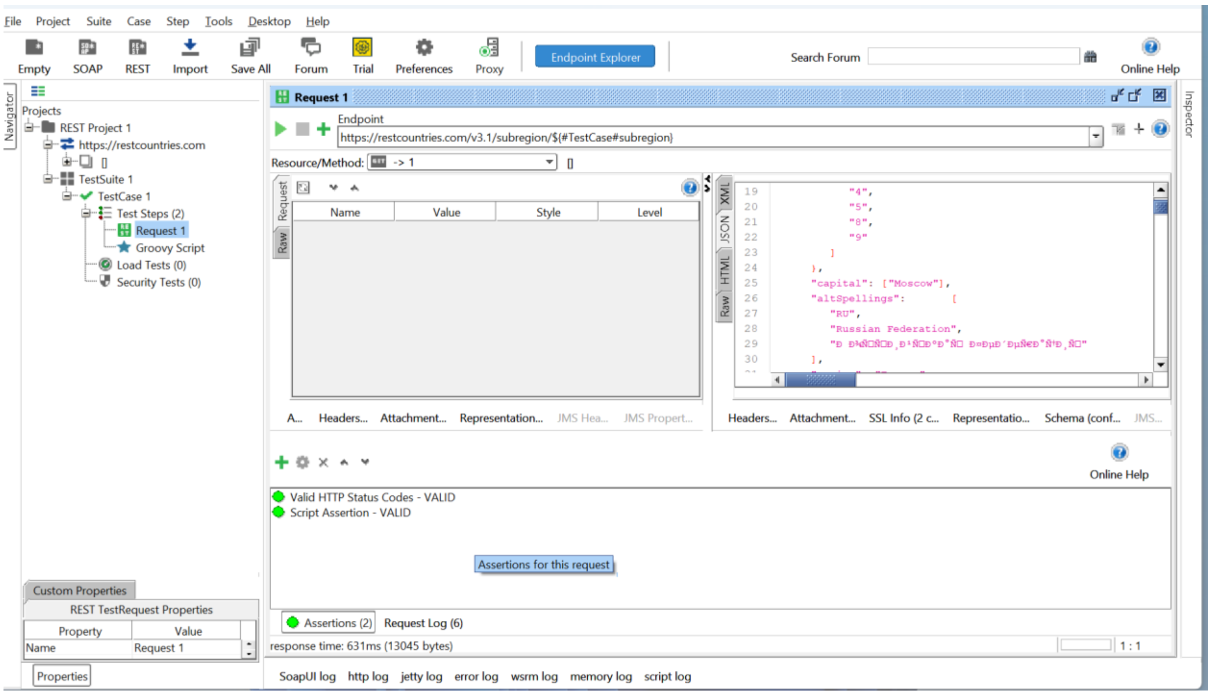


Property	Value
Name	Groovy Script

```
def filePath = "C:/subregion.csv"
def lines = new File(filePath).readLines()

// Get the REST request step
def requestStep = testRunner.testCase.getTestStepByName("Request 1")

for (int i = 1; i < lines.size(); i++) {

    def subregion = lines[i].trim()
    log.info "Running for: " + subregion

    // Set TestCase property
    testRunner.testCase.setPropertyValue("Subregion", subregion)

    // Run REST Request
    requestStep.run(testRunner, context)

}
```

```
Wed Feb 25 11:59:47 IST 2026:INFO:Running for: Northern Europe
Wed Feb 25 11:59:50 IST 2026:INFO:Running for: Southren Europe
Wed Feb 25 11:59:50 IST 2026:INFO:Running for: Western Europe
Wed Feb 25 11:59:51 IST 2026:INFO:Running for: Eastern Europe
```

Request:



Endpoint: https://restcountries.com/v3.1/subregion/${#TestCase#subregion}

Resource/Method: -> 1

Name	Value	Style	Level

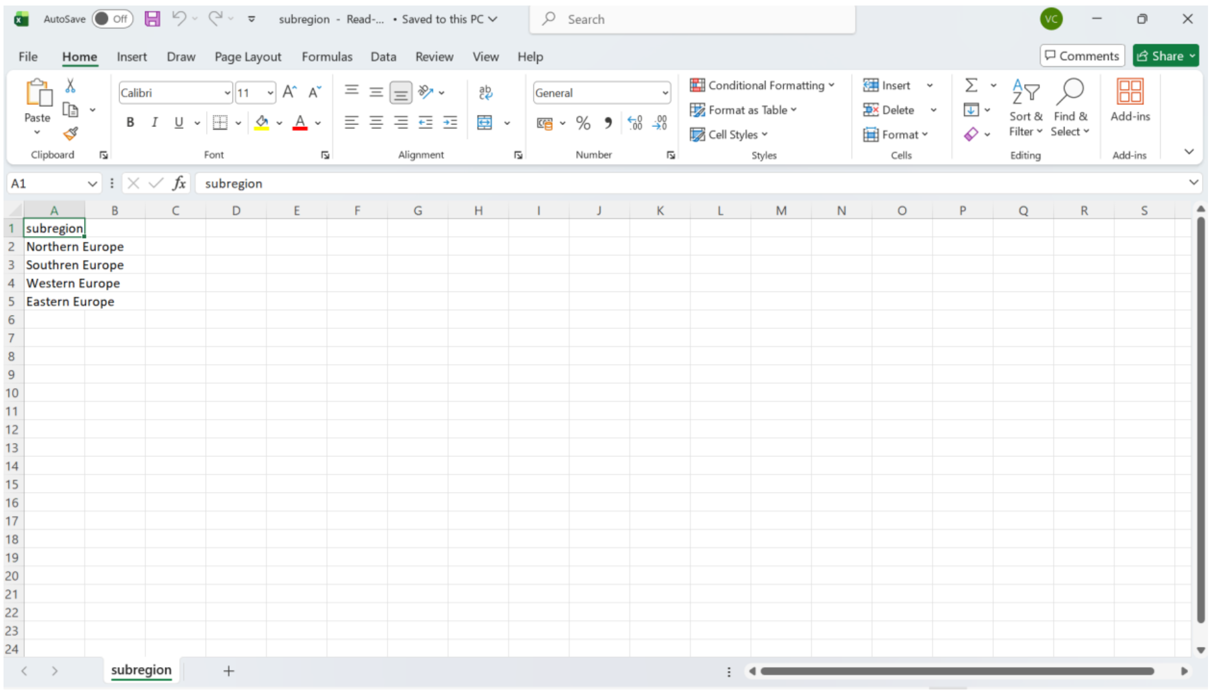
```
        "4",
        "5",
        "8",
        "9"
      ]
    },
    "capital": ["Moscow"],
    "altSpellings":        [
      "RU",
      "Russian Federation",
      "Ð Ð¾ÑÑÐ¸Ð¹ÑÐºÐ°Ñ Ð¤ÐµÐ´ÐµÑÐ°ÑÐ¸Ñ"
    ],
```

● Valid HTTP Status Codes - VALID
● Script Assertion - VALID

response time: 631ms (13045 bytes)

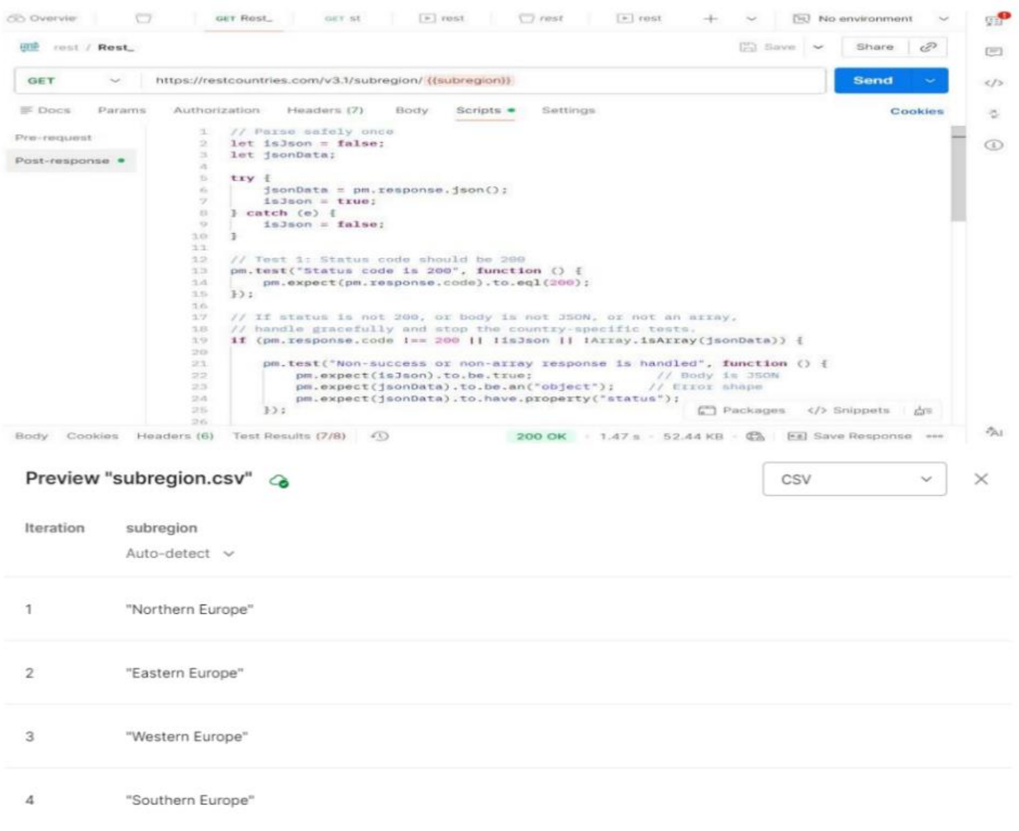
Property	Value
Name	Request 1

Excel sheet:



	A
1	subregion
2	Northern Europe
3	Southren Europe
4	Western Europe
5	Eastern Europe

Output:



GET https://restcountries.com/v3.1/subregion/{{subregion}}

```
// Parse safely once
let isJson = false;
let jsonData;

try {
    jsonData = pm.response.json();
    isJson = true;
} catch (e) {
    isJson = false;
}

// Test 1: Status code should be 200
pm.test("Status code is 200", function () {
    pm.expect(pm.response.code).to.eql(200);
});

// If status is not 200, or body is not JSON, or not an array,
// handle gracefully and stop the country-specific tests.
if (pm.response.code !== 200 || !isJson || !Array.isArray(jsonData)) {

    pm.test("Non-success or non-array response is handled", function () {
        pm.expect(isJson).to.be.true;                 // Body is JSON
        pm.expect(jsonData).to.be.an("object");     // Error shape
        pm.expect(jsonData).to.have.property("status");
    });
```

200 OK

Preview "subregion.csv"

Iteration	subregion Auto-detect
1	"Northern Europe"
2	"Eastern Europe"
3	"Western Europe"
4	"Southern Europe"

Chithrashree P

Emp ID: 8182621